allowable subject matter, but being dependent of a rejected base claim. Claims 1, 4 and 5 were rejected under 35 U.S.C. §102.

No claims have amended or cancelled. Reconsideration of the application is requested.

Claim 1 recites a method for maintaining the force of a variable reluctance motor during its operation. The method includes the steps of (1) sensing a speed of the motor and (2) varying the inductance of the motor based on the sensed speed. These steps are not disclosed in the prior art.

Claims 1, 4 and 5 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,912,542 to Zalesski that discloses a motor control circuit including an amplifier with an inductance compensation circuit. As discussed in the patent to Zalesski, the inductance compensation circuit provides compensation for certain driving characteristics of the motor **in response to** variations in the inductance of the motor.

Contrary to the position taken in the Office Action, the inductance compensation circuit does not compensate for the inductance change in the motor by varying or otherwise changing the inductance of the motor. Instead, the compensation circuit of Zalesski provides compensation to characteristics of the drive system of the motor after the inductance of the motor has changed. This compensation can include changing the voltage across the inductor after the inductance has changed.

The motor disclosed in the patent to Zalesski operates with a phase inductance which varies widely. The inductance compensation circuit is coupled to a current error amplifier to dynamically vary the response characteristics of the current error amplifier in response to changes in the reactance of the motor. As discussed in column 3, lines 38-41,

the inductance compensation inputs adjust the amplifier and/or the driver output to compensate for the different core inductances reached during the operation of the motor.

Column 4, line 46 through column 5, line 5 of the patent to Zalesski explains that the term "compensate" is not used to describe a change in the inductance of the motor caused by the current error amplifier. Instead, it is used to describe the change that is made to the drive characteristics of the motor system in response to a sensed change in the inductance of the motor – to compensate the drive characteristics of the motor in response to the sensed change of inductance.

Specifically, it is disclosed that the motor is driven by a pulse width modulator. The pulse width modulator is controlled by the current output of the current error amplifier. The pulse width modulator outputs a current monitor signal that can be fed back into the current error amplifier and compared with a current reference signal. The difference between these two signals can be amplified by the amplifier and output into the pulse width modulator to complete the feedback loop. The amplification factor of the amplifier is controlled by either feedback circuit A or feedback circuit B. The switch (44), illustrated in Figure 4, is controlled by the inductance change detector and alternatingly switches in and out feed circuit A or B in response to changes in the inductance of the motor so that the amplification provided by the proper feedback circuit can be applied to the motor drive characteristics in response to the change in inductance within the motor.

Additionally, as discussed in Column 5, lines 57-68 and Column 6, lines 1-14, the current error amplifier, in conjunction with the motor and pulse width modulator, forms a feedback loop which controls one of the drive characteristics of the motor - the

voltage across the motor, and hence the current in the motor. The current error amplifier allows the amplification factor controlled by either feedback circuit A or feedback circuit B to be matched to the value of the inductance in the motor as the inductance changes between first and second values so that motor continues at the desired performance level.

For example, the larger the inductance, the longer it will take for current to change in the motor. Accordingly, a higher amplification factor is required to compensate for the delay at the larger inductance of the motor. When the inductance increases to the higher value, an increase in the gain of the current error amplifier produces a larger voltage across the load, thereby decreasing the response time of the control system. The rate of change of current in an inductor in the motor is proportional to the voltage across the inductor.

Conversely, when the inductance of motor decreases to the lower value, the higher amplification provided to compensate for the higher inductance may cause undesired oscillation. As a result, the inductance change detector will cause control switch 44 to move and switch in the feedback network that provides the lower compensation amplification to create the desired voltage across the inductor. Accordingly, as the inductance changes to the lower value, the compensation circuit decreases the voltage across the inductor, it does not change the inductance of the motor as suggested in the Office Action.

As can be seen from a fair reading of the patent to Zalesski, the inductance compensation circuit does not change the inductance within a motor, but instead, changes the voltage across the inductor <u>in response</u> to a sensed change of inductance in the motor. Accordingly, the patent to Zalesski cannot disclose a method including the steps of (1)

sensing a speed and (2) varying the inductance of the motor in response to a sensed speed as recited in claim 1. Withdrawal of the rejection is requested.

In view of the foregoing, it is respectfully submitted that the pending claims are allowable and that the application is in condition for allowance. If any questions or issues remain, the resolution of which the Examiner feels would be advanced by a conference with Applicants' attorney, the Examiner is invited to contact Applicants' attorney at the number noted below.

Respectfully submitted,

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